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Judged Fairness and Contingent Valuation : Effects of Equity on Absolute and Relative Willingness To Pay

JUDGED FAIRNESS AND CONTINGENT VALUATION: EFFECTS OF EQUITY ON ABSOLUTE AND RELATIVE WILLINGNESS TO PAY

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Abstract

An experiment was conducted to test the effects of perceived equity on willingness to pay for a public good. Using four different scenarios, college students were asked to judge the fairness of a requested donation, and the amount of money they would be willing to donate. Each scenario varied the stipulated cost of the public good and the equity of the requested contribution. A relatively low stipulated cost was judged to be more justified than a relatively high cost, and in two of the four scenarios, an equitable request was perceived to be more justified than an inequitable request. Willingness to pay, although correlated with judged fairness, was unaffected by the experimental manipulations. However, the manipulations of equity were reflected in the amount of money respondents were willing to pay *relative* to the amount they were asked to pay. When the requested amount was viewed as unfair, respondents reacted by indicating that they were willing to pay less than requested.

Contingent valuation (CV) is a popular tool to assess the dollar value of goods that are not traded in the market place (for reviews, see Cummings, Brookshire, & Schulze, 1986; Mitchell & Carson, 1989). Respondents in a survey are asked to provide an estimate of how much money they would be willing to pay for a certain good in a hypothetical or contingent market. The monetary value of the good in question is measured by aggregating these willingness-to-pay (WTP) judgments in the relevant population. Although scores of contingent valuation surveys have been conducted in recent years, the validity of the derived measures is often disputed. Detractors of the contingent valuation method have been concerned primarily with systematic biases that may influence WTP judgments and hence jeopardize the measure's validity. Frequently mentioned concerns include the starting value (if a bidding method is used), the hypothetical nature of WTP questions, the particular information provided in the description of the public good (context cues, embedding effects), and the possibility of strategic considerations (see Hoehn & Swanson, 1988, for a review). Biases introduced by these factors are assumed to produce over- or underestimates of the true amount people would be willing to pay for a public good or service.

Even though widely used as a psychological measure of economic value, surprisingly little is known about the psychological underpinnings of contingent valuation. It is only recently that investigators have gone beyond demonstrating the existence of biases to look at the ways in which respondents in CV surveys arrive at their judgments (e.g., Ajzen, Brown, & Rosenthal, 1996; Kahneman & Knetsch, 1992; Kahneman, Ritov, Jacowitz, & Grant, 1993; Schkade & Payne, 1994). The broadest descriptive account to date was provided by Schkade and Payne (1994). In a study concerned with willingness to pay for the preservation of migratory waterfowl, respondents were asked to verbalize the considerations that went into their judgments. Generally speaking,

respondents tended to acknowledge that something needed to be done and then tried to determine how much an appropriate amount would be. Frequently mentioned considerations that correlated with WTP responses involved doing one's fair share, the anticipated cost of the proposed solution, and family income.

The focus of the present research is the perceived equity or fairness of being asked to pay for a public good, a factor that was also implicated in a study by Kahneman & Knetsch (1992). We assume that two major types of considerations determine contingent value judgments. Willingness to pay for a specified good should first be a function of the value respondents attach to the good in question. Only when respondents agree that the proposed change is desirable should they be willing to pay some amount of money for it; and the greater the judged desirability or utility of the change, the more money they should be willing to pay, all else being equal. In this respect, paying for public goods is comparable to paying for private goods. Recent research has provided support for these ideas by showing that respondents indicate a greater willingness to pay for private or public goods if the information they are given about those goods makes a persuasive case for their value (Ajzen, Brown, & Rosenthal, 1996).

Where WTP for public goods differs from WTP for private goods is in the second type of consideration. Given that respondents acknowledge the value of the proposed change in public good, willingness to contribute is hypothesized to be influenced by judgments of fairness. The specific amount of money respondents would be willing to pay is expected to reflect the amount of money they consider to be fair or equitable under the stipulated circumstances. Unlike a private good, a public good or service benefits a broad segment of a community or society. People are

therefore likely to believe that its cost should be borne by all those who benefit from it in a way that would be judged fair or just.

Much theorizing and research have been devoted to the multidimensional concepts of justice, fairness, and equity (for reviews, see Adams, 1965; Deutsch, 1975; Mikula, 1980; Steensma & Vermunt, 1991; Vermunt & Steensma, 1991). Of central importance for our purposes is the generally accepted idea that fairness or equity is judged in relation to some standard of comparison. Various standards may be available, depending on the nature of the situation in which judgments are made. Participants in the present research were asked to indicate their willingness to donate money in four different situations or scenarios. In an attempt to explore different aspect of fairness, these scenarios systematically varied information that should be relevant to judgments of equity. The anticipated cost of changes in the public good or service provided one item of relevant information. Clearly, the payment amount that would be considered fair should depend to some extent on the amount of money needed to institute the desired change. Other items of information had to do with the extent to which the respondent would benefit from the change relative to other beneficiaries, the amount of money contributed in other communities, and the agent responsible for damage that produced a need for change.

In general terms, we hypothesized that willingness to pay is influenced by the perceived equity of a requested contribution. The more equitable the request is perceived to be, the more a person should be willing to pay. In addition, we expected that equity considerations also influence *relative* WTP, that is, that they affect the amount of money a person is willing to pay relative to the amount requested. If the request is perceived to be fair, respondents should be willing to pay the requested

amount. If, however, it is perceived to be unfair, they may react by indicating a willingness to pay less than the requested amount.

The following specific hypotheses were formulated. (1) Across experimental conditions, WTP increases with the perceived value of the public good and with the perceived fairness of the requested contribution. (2) The amount of money people are willing to pay, and the amount they are willing to pay relative to the amount requested, vary with any factor in the situation that raises or lowers perceptions of fairness.

Method

Respondents and Procedure

Eighty college students enrolled in low-level undergraduate courses at the University of Massachusetts, took part in the investigation in exchange for course credit. They were assigned at random, and in equal numbers, to each of the four experimental conditions. After receiving information about the study and signing a consent form, the participants, in small groups ranging in size from 4 to 12, completed a written survey. At the end, they were given an explanation of the experiment and were thanked for their participation.

Questionnaire

The materials used in the experiment consisted of a self-contained questionnaire which described four different projects conducted by the University (see Appendix 1 for a copy of the questionnaire). With respect to each project, the participants were asked to make a monetary contribution to a fund drive. These materials were developed in two pilot studies designed to construct scenarios relevant to college students, and to determine appropriate levels of requested contribution. The booklet containing the questionnaire was titled, "University of Massachusetts

Issues Survey." It consisted of two parts. In the first part, each of the projects was described, followed by two willingness-to-pay questions. The project descriptions were repeated in the second part, followed by a series of questions designed to assess the perceived value of the project and the perceived fairness of the requested contribution. The four projects were arranged in two different random orders, which was the same in the two parts of the questionnaire.

On the first page of the booklet, the participants were informed that they would be given descriptions of four issues facing the University of Massachusetts. They were told that with respect to each issue, they would be asked to consider making a monetary contribution to a fund drive. However, although they would be reading about four different fund drives, they were told that only one would be instituted in the next five years, and they were asked to regard each of the fund drives as if it were the only one under consideration. This instruction was also reiterated orally.

Respondents were asked to consider making a monetary contribution to a library support fund, a bus expansion program, a community outreach program, and a campus beautification project. Each scenario manipulated the amount of money needed or desired for the project (high vs. low), and the equity of the requested contribution (equitable vs. inequitable), in a 2 X 2 design. With respect to each of the four scenarios, respondents were assigned into a different cell of the design.

University library fund. The University library system was said to have undergone a series of budget cuts over the past five years. To pay for needed computer equipment and book additions, the University administration was planning to conduct a fund drive. The respondents were informed that, based on past experience with drives of this kind, it was projected that an average donation of $5 (or $15, depending on experimental condition) would raise the needed amount of money. Respondents were then requested to imagine that they were asked to contribute either the needed

amount (i.e., $5 or $15) in the high equity condition, or twice the needed amount (i.e., $10 or $30) in the low equity condition.

Bus expansion program. In this scenario, the local free bus service was to be expanded to cover some of the more remote residential areas. The proposed expansion would mainly benefit residents in the new service areas, most of whom were not students, although students might benefit indirectly by reduced traffic, less demand on parking, and better access to lower-cost housing in remote areas. Additional funds allocated by the State for this project were said to be insufficient. Consequently, the transit authority was planning a fund drive to help pay for the bus expansion program. Respondents were told that the amount needed was either $8 or $16 (depending on experimental condition). In addition, in the high equity condition, respondents were told that because students will not benefit from this program as much as residents, they will be asked to make a donation of only half this amount (i.e., $4 or $8). In the low equity condition, they were told that although students will not benefit from this program as much as residents, they will be asked to make the same contribution (i.e., $8 or $16).

Community outreach program. In this scenario, respondents were informed that many people in communities surrounding the University have been laid off work and are unable to find work. As a result, many families are unable to afford basic necessities, such as heat, food, and a place to live, and children are forced to go to school hungry or without proper clothing to keep warm in the winter. The University was said to be planning an outreach program that would provide monetary aid to needy families in the area and would also offer counseling, job training, and other support. The respondents were informed that, to raise the needed start-up funds, the University was planning a campus fund drive. To manipulate normative baseline, there were further told that fund drives for

similar programs at other large state universities have resulted in average student contributions of about $6 or $12 (depending on experimental condition). They were then to imagine that they had been approached by the organizers of the community outreach fund drive and had been asked to donate this amount (i.e., $6 or $12) in the high equity condition, or twice this amount (i.e., $12 or $24) in the low equity condition.

Campus beautification project. This scenario dealt with the marred landscaping of the University campus. Especially problematic was said to be the poor condition of the grass and shrubbery near pathways. In the high equity condition, respondents were informed that landscape architects had concluded that the problem is caused mainly by the large number of students who stray from the paved pathways and thus stunt the growth of grass and plants. In the low equity condition, the problem was attributed to trucks and other delivery vehicles that stray from the paved pathways. To correct the problem and prevent its recurrence, ground crews were ready to install new and improved pathways, erect signs to direct traffic, and block access to certain areas. A fund drive was to be instituted to pay for this beautification project, and students would be asked to contribute the required amount, either $6 or $12 (depending on experimental condition).

Willingness to pay. Two willingness-to-pay questions followed each of the four project descriptions. The first question inquired into the respondent's general intention to make a voluntary contribution to the fund drive. Respondents indicated their intention to make a contribution by circling a number from 1 (definitely not willing) to 7 (definitely willing). The second question offered ten response alternatives, each labeled with a different amount of money. Respondents were asked to indicate the amount they would be willing to pledge by checking one of the alternatives or by writing an amount in a space provided at the end. The range of alternative amounts provided

always began with $0 at the lower end, but the upper limit varied for the different projects. It was $30 for the library fund, $18 for the bus expansion project, $25 for the outreach program, and $18 for the campus beautification project.

Perceived value and fairness. In the introduction to the second part of the questionnaire, respondents were told that they would be asked some additional questions about each of the four projects. These questions were separated from the first part to avoid contaminating the willingness -to-pay estimates. So that they would not have to look back at the first part, each description was reprinted. Respondents were given the description corresponding to their experimental condition, followed by six questions. The first three questions asked respondents to rate the value of the project on three 7-place scales whose endpoints were labeled *extremely undesirable – extremely desirable, extremely unimportant – extremely important,* and *extremely worthless – extremely worthwhile.* The internal consistencies of responses to these three items, as measured by Cronbach's alpha, were high, ranging from .79 in the library scenario to .92 in the outreach scenario. Responses to the three items were therefore averaged to yield a measure of a project's perceived value.

The second set of questions referred to the specific amount of money the respondent had been asked to donate to the project. These questions were designed as a check on the equity manipulation. Respondents rated the equity of the requested amount on three 7-place scales whose endpoints were labeled *extremely unfair – extremely fair, extremely unreasonable – extremely reasonable,* and *extremely unjust – extremely just.* Internal consistencies among these three items were also high, ranging from .93 in the campus beautification scenario to .97 in the bus expansion scenario. Averages across the three items were used to assess the perceived fairness of the requested donation.

Results

Data were analyzed separately for each of the four scenarios. Two types of analyses were performed. The first was based on within-cell correlations in which the judged value of the project and the judged fairness of the requested contribution were used to predict intentions to make a donation and the amount of money respondents were willing to pay. Within-cell correlations and multiple regressions were computed by first standardizing responses around the cell means.

The second kind of analysis examined the effects of the two manipulated factors (amount of donation said to be needed or expected and level of equity) on perceived value of project, perceived fairness of requested contribution, intentions to donate, absolute amount willing to pay, and amount willing to pay relative to amount requested. Relative willingness to pay was computed by dividing measured WTP by the requested amount.[1]

University Library

Intentions to donate to the library fund, and the amount respondents were willing to pay, were each regressed on the perceived value of the project and on the perceived fairness of the requested donation. Table 1 shows the results of the multiple regression analyses. It can be seen that both predictors correlated significantly with intentions and WTP, but only perceived fairness retained significant weights in the multiple regression analyses. It thus appears that, across experimental condition, respondents' general willingness to make a contribution to the library fund, and the particular amount they were willing to donate – although related to the perceived value of the library improvement project – were influenced primarily by the perceived fairness of the requested donation.

Insert Table 1 about here

As expected, the perceived value of the library project was unaffected by the stipulated cost of the project or by the equity of the requested contribution (see Figure 1a). The value of the library improvement project was judged to be quite high, irrespective of experimental condition. Figure 1b shows that the equity manipulation was effective. A requested contribution of high equity was judged to be more justified than a low-equity request. In addition, it can also be seen in Figure 1b that the lower stipulated cost ($5) was judged to be more justified than the higher amount ($15).

Insert Figures 1a and 1b about here

The general intention to make a monetary contribution to the library fund was unaffected by the experimental manipulations (see Figure 1c). Respondents indicated intentions above the midpoint of the scale, irrespective of the details of the requested donation. These details also had little effect on the absolute amount of money they were willing to pay (see Figure 1d), although there was a marginally significant trend for greater WTP in the high as compared to the low equity condition.

Insert Figures 1c and 1d about here

The strongest effects of the experimental manipulations emerged in the analysis of relative willingness to pay for the library project. Figure 1e shows that relative willingness to pay was highest when a low rather than a high cost was stipulated, and when the requested amount was of high rather than low equity. These effects correspond to the effects of the experimental manipulations on perceived fairness (see Figure 1b): The greater the perceived fairness created by a given manipulation, the greater the relative WTP. In addition, there was a significant interaction between stipulated cost and equity, such that the effect of cost on relative WTP was greater under high rather than low equity conditions.

Insert Figure 1e about here

Bus Expansion

The results for the bus expansion project resembled those for the University library. Table 2 and Figures 2a to 2e summarize the findings. It can be seen in Table 2 that intentions and willingness to pay were again influenced primarily by the judged fairness of the requested contribution, rather than by the perceived value of the bus expansion project, although perceived value did correlate significantly with intentions and WTP. The stipulated cost of the project and the equity of the requested contribution had no significant effects on the project's perceived value (Figure 2a), but these variables significantly influenced the perceived fairness of the request: Perceived fairness increased with level of equity, confirming the effectiveness of the equity manipulation, and it declined with stipulated cost (Figure 2b).

Insert Table 2 and Figures 2a and 2b about here

Neither intention to make a contribution nor absolute willingness to pay were affected by the experimental manipulations (Figures 2c and 2d), but relative WTP reflected both the stipulated cost and the equity of the request. Again corresponding with perceived fairness, relative WTP was greater when the stipulated cost was low rather than high, and when the request was of high rather than low equity (Figure 2e).

Insert Figures 2c, 2d, and 2e about here

Community Outreach

Table 3 shows the results of the correlational analyses for the community outreach project. The perceived value of the project and the perceived fairness of the requested contribution correlated significantly with intentions and willingness to pay, and both retained significant weights in the multiple regression analyses. Further, as in the previous scenarios, the perceived value of the outreach project was unaffected by the experimental manipulations (normative baseline and equity of requested donation – see Figure 3a).

Insert Table 3 and Figure 3a about here

The results displayed in Figure 3b show that the equity manipulation was not successful; it failed to have a significant effect on perceived fairness. However, as in the two previous scenarios, perceived fairness was significantly influenced by the normative baseline for the project: judged fairness of the requested donation varied inversely with normative baseline.

Insert Figure 3b about here

The intention to make a monetary contribution to the community outreach project was influenced significantly neither by normative baseline nor by equity, consistent with findings for the first two scenarios (see Figure 3c). Unexpectedly, however, the absolute amount respondents were willing to donate was significantly higher under low than under high equity conditions. Normative baseline, on the other hand, did not have a significant effect (see Figure 3d).

Insert Figures 3c, 3d, and 3e about here

Finally, relative WTP – like perceived fairness – was influenced only by the normative baseline for the outreach program. As can be seen in Figure 3e, the lower baseline, which was judged more justifiable, produced greater willingness to pay relative to the amount *requested.* *Campus Beautification*

The correlational analyses for the campus beatification project, shown in Table 4, produced results consistent with the other scenarios. Intentions to donate and WTP amounts correlated

significantly with both, perceived value and fairness, but much of the variance in the multiple regression was accounted for by perceived fairness.

Insert Table 4 about here

The analyses of variance, however, produced very few significant results. Figures 4a through 4e summarize the findings. As expected, neither manipulation influenced the perceived value of the campus beatification project. Contrary to expectations, but similar to the campus outreach program, the equity manipulation was ineffective; it failed to have a significant effect on the perceived fairness of the requested donation, which was influenced only by the stipulated cost (see Figure 4b). Figures 4c shows that neither of the two experimental manipulations had a significant main effect on intentions to make a donation, but the interaction was significant. When students were said to produce the damage to the landscape (high equity), respondents indicated stronger intentions to donate money if asked for $6 as opposed to $12. However, the *amount* of money respondents were willing to donate (WTP) did not vary significantly as a function of equity or stipulated cost (see Figure 4d). Finally, like perceived fairness, relative WTP decreased significantly with stipulated cost and was unaffected by the equity manipulation (see Figure 4e).

Insert Figures 4a through 4e about here

Discussion and Conclusions

The results of the present experiment provided some support for the proposed view of the determinants of willingness to pay for a public good or service, but they also revealed certain methodological weaknesses. The correlational analyses in all four scenarios showed that WTP varied directly with the perceived value of the contemplated project and with the fairness of the requested donation. Perceived value and fairness also correlated significantly with each other; the correlations ranged from .52 in the campus beautification scenario to .71 in the bus expansion project. When used simultaneously to predict donation intentions and WTP, judged fairness was found to be the more important of the two factors.

The effects of the experimental manipulations, however, were more ambiguous. Checks revealed that only in the library and bus scenarios was the manipulation of equity successful. The requested donation was judged to be more fair and justified in the high as compared to the low equity conditions. In the other two scenarios (campus outreach and beautification), the manipulation of equity had no significant effects on judged fairness. On the other hand, the stipulated amount of money needed or expected had strong effects on perceived fairness in all four scenarios, such that the smaller amount was judged to be more justified than the larger amount. Although not hypothesized, this effect created differences in perceived fairness that should also have been reflected in willingness to pay.

Neither general intentions to make a donation nor the absolute amount of money respondents were willing to pay showed much effect of the experimental manipulations. The lack of significant results with respect to intentions is understandable because this measure did not involve a specific

amount of money. It may simply indicate a willingness to make *some* contribution, irrespective of fairness considerations.

The lack of effects on the absolute WTP amount, however, is more difficult to explain. In retrospect, we realize that the manipulation of equity may have confounded two aspects, with contradictory effects on WTP. Equity was manipulated in relation to one of two amounts of money said to be needed or expected. In the high equity condition, the donation requested was equal to the needed amount, whereas in the low equity condition, it was twice as much.[2] As a general rule, the amount of money a person is willing to contribute should increase with the amount requested. However, a high requested amount is inequitable when it exceeds the needed amount. In the low equity condition, therefore, the tendency to contribute more when more money is requested might work against the tendency to contribute less when the amount is considered unfair.

The effect of amount needed or expected (stipulated cost) on WTP may be similarly obscured. A low stipulated cost requires less of a donation, but at the same time it was judged to be more equitable, and hence would favor a greater donation. No clear effect on WTP can therefore be projected.

The amount of money respondents were willing to pay *relative* to the amount requested overcomes some of these problems, as shown by the results. Relative WTP generally showed the same pattern of results as perceived fairness, except in the campus beautification scenario in which neither manipulation had a significant effect on relative WTP. In other words, under experimental conditions that produced a high level of judged fairness, respondents were willing to pay an amount of money that was quite high relative to the amount requested. But when the scenario was such that

the amount of money requested appeared to be unjustified, respondents reacted by indicating that they were willing to pay much less than requested.

Given the likely confounds in the effects of the experimental manipulations, and the fact that the equity manipulation was significant in only two of the four scenarios, the conclusions reached here must be regarded as tentative. Further research is required to develop unambiguous manipulations of equity, and to further explore the effect of cost on perceived equity and the difference between absolute and relative willingness to pay.

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Footnotes

1. Once absolute WTP is standardized around cell means, relative willingness to pay is a linear transformation of absolute WTP, thus leaving correlations with other variables unchanged.

2. This was true only in three of the four scenarios. In the campus beautification scenario, high versus low equity was manipulated by attributing the damaged landscape either to the behavior of students or to delivery vehicles. This manipulation should not have produced the same confounding effect as in the other scenarios. Unfortunately, the manipulation of equity in the campus beautification scenario did not have a significant effect on perceived fairness, and its effect on WTP could thus not be tested.

Table 1

University Library: Within-Cell Multiple Regressions

Dependent Variable	Correlation Coefficient Value	Correlation Coefficient Fairness	Regression Coefficient Value	Regression Coefficient Fairness	Multiple R
Intention	.50**	.60**	.20	.47**	.62**
WTP	.44**	.53**	.17	.42**	.54**

*p < .05; **p < .01.

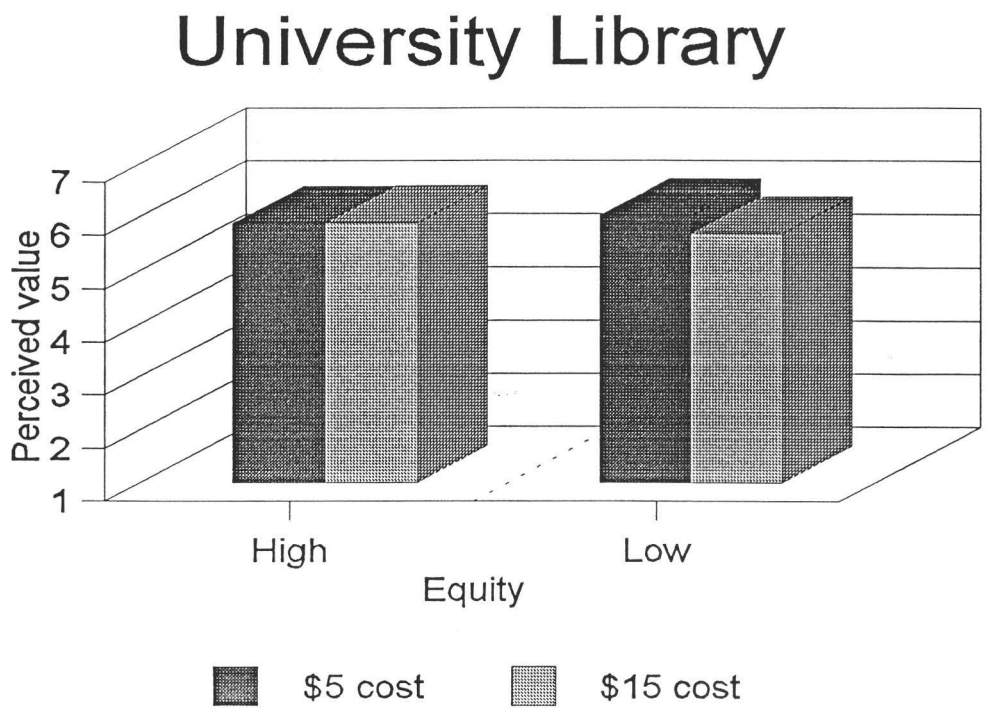

Figure 1a. Perceived value of library improvement project as a function of stipulated cost and equity of requested contribution.

Cost: F = .24, ns; Equity: F = .12, ns; Cost X Equity: F = 1.06, ns.

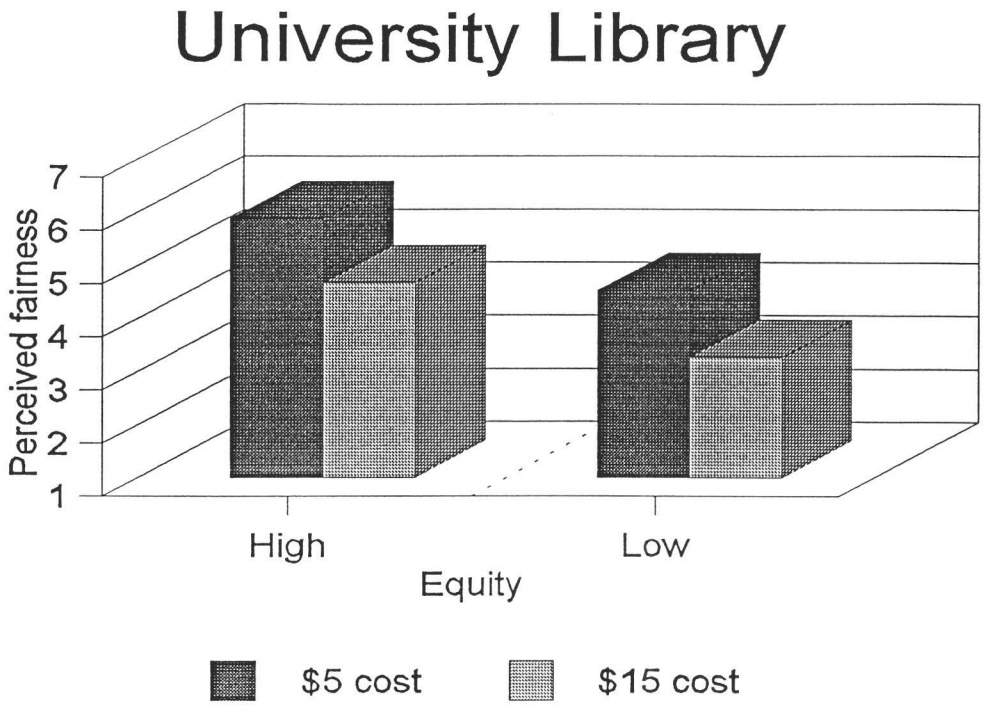

Figure 1b. Perceived fairness of requested contribution as a function of stipulated cost and equity of requested contribution.

Cost: $F = 10.54$, $p < .01$; Equity: $F = 13.26$, $p < .001$; Cost X Equity: $F = .01$, ns.

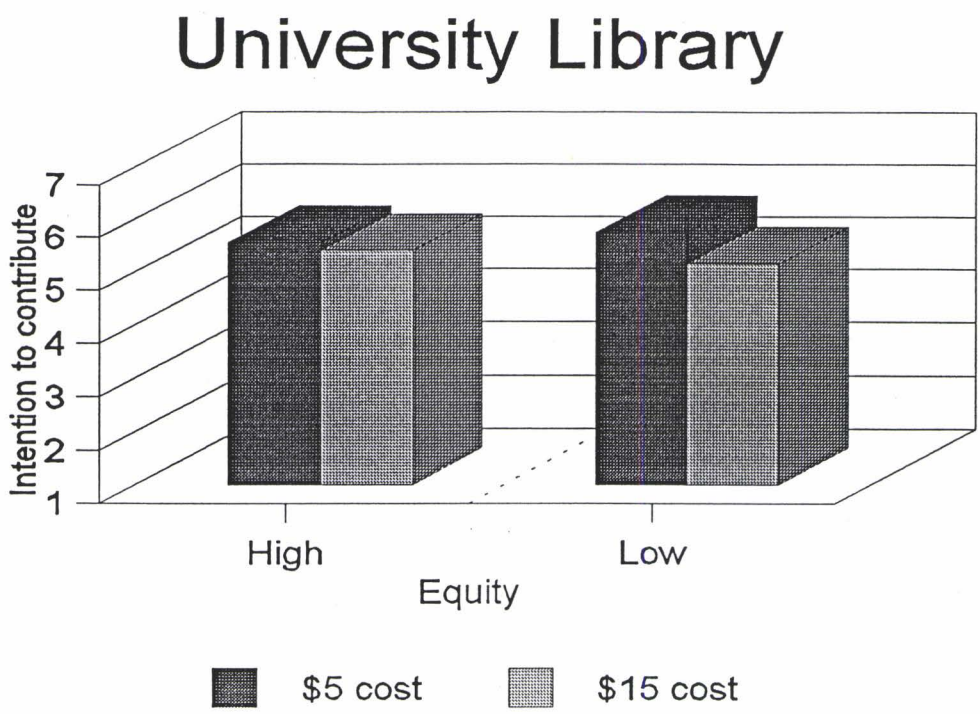

Figure 1c. Intention to contribute as a function of stipulated cost and equity of requested contribution.

Cost: F = .1.41, ns; Equity: F = .01, ns; Cost X Equity: F = .51, ns.

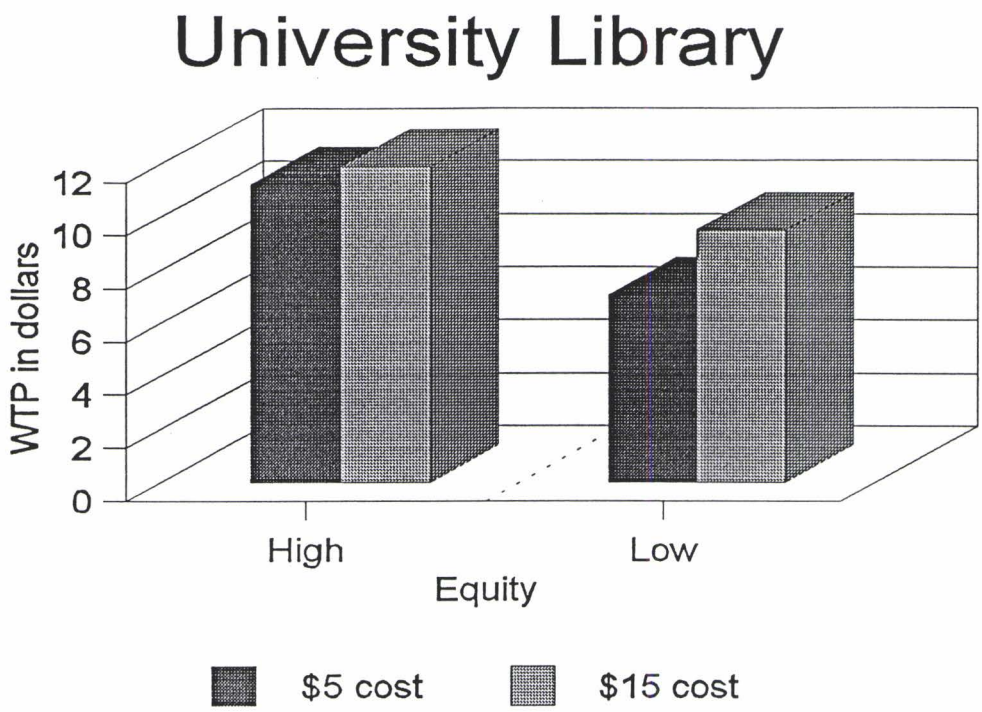

Figure 1d. Willingness to pay as a function of stipulated cost and equity of requested contribution.

Cost: $F = .65$, ns; Equity: $F = 2.96$, $p < .09$; Cost X Equity: $F = .22$, ns.

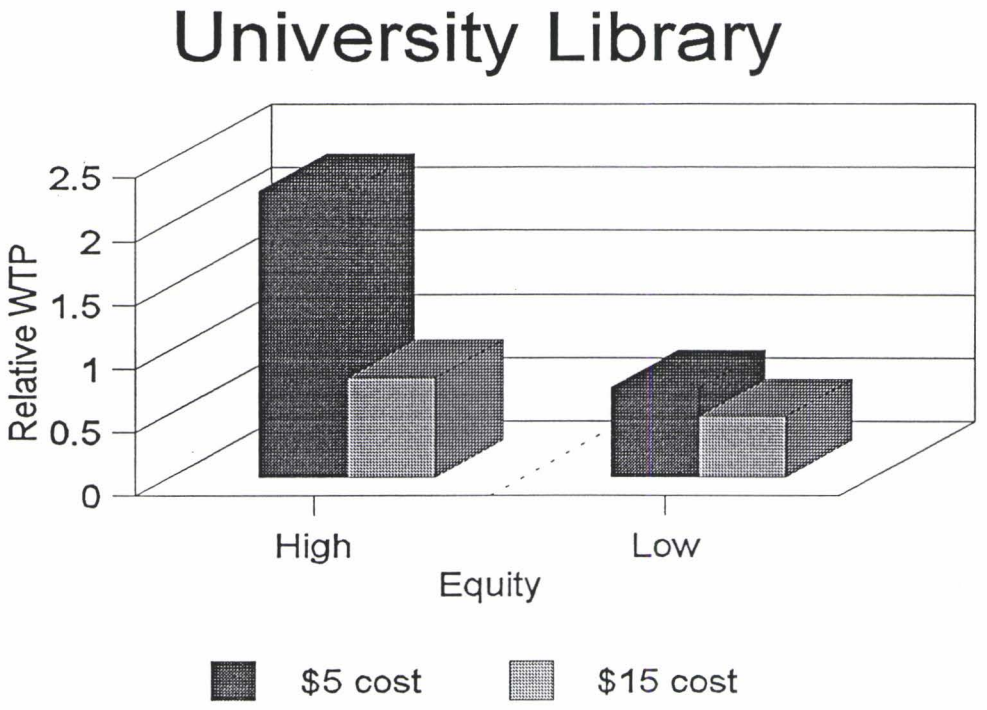

Figure 1e. Willingness to pay relative to amount requested, as a function of stipulated cost and equity of requested contribution.

Cost: $F = 9.67$, $p < .01$; Equity: $F = 11.81$, $p < .001$; Cost X Equity: $F = 5.12$, $p < .05$.

Table 2

Bus Expansion: Within-Cell Multiple Regressions

Dependent Variable	Correlation Coefficient		Regression Coefficient		Multiple
	Value	Fairness	Value	Fairness	R
Intention	.53**	.63**	.17	.51**	.64**
WTP	.41**	.70**	−.17	.81**	.71**

*p < .05; **p < .01.

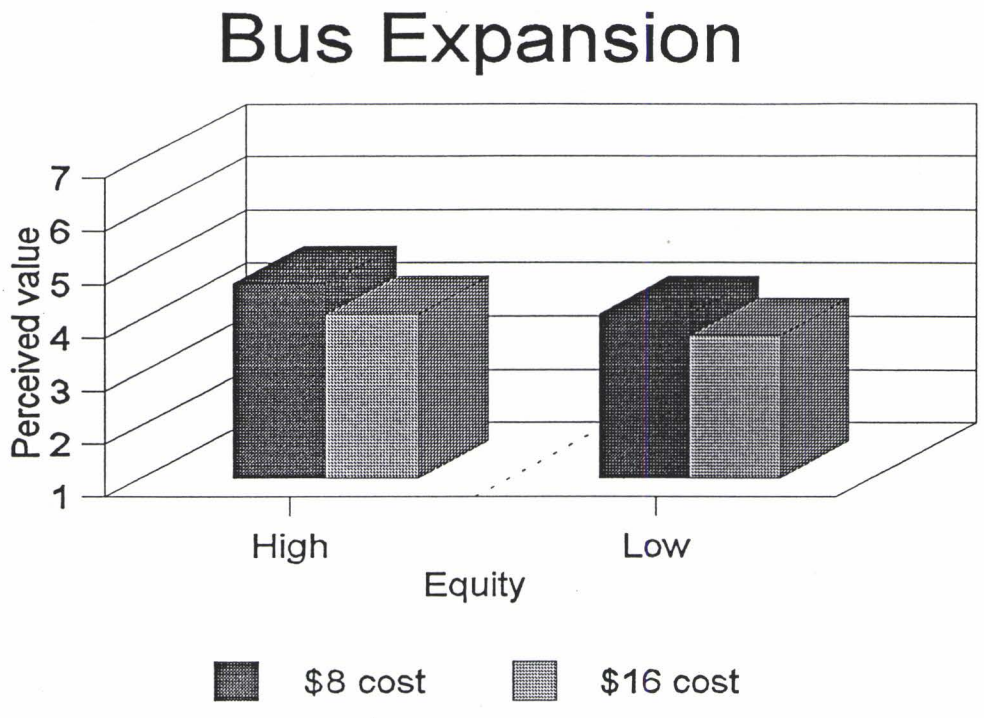

Figure 2a. Perceived value of bus expansion project as a function of stipulated cost and equity of requested contribution.

Cost: $F = 2.92$, $p < .10$; Equity: $F = 2.92$, $p < .10$; Cost X Equity: $F = .09$, ns.

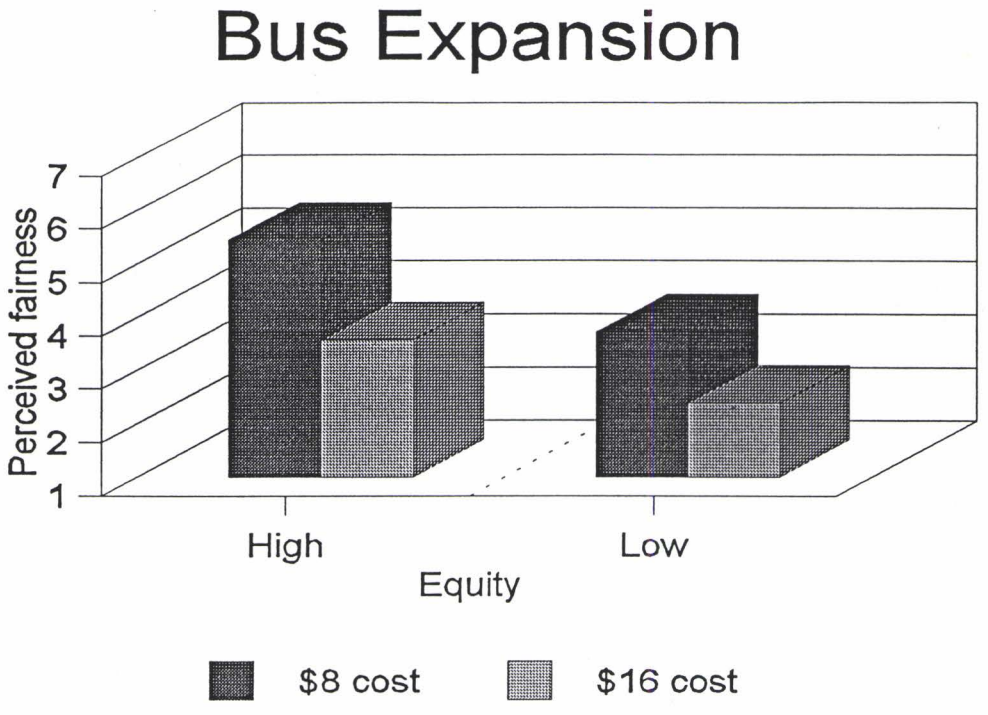

Figure 2b. Perceived fairness of requested contribution as a function of stipulated cost and equity of requested contribution.

Cost: $F = 24.54$, $p < .001$; Equity: $F = 20.18$, $p < .001$; Cost X Equity: $F = .72$, ns.

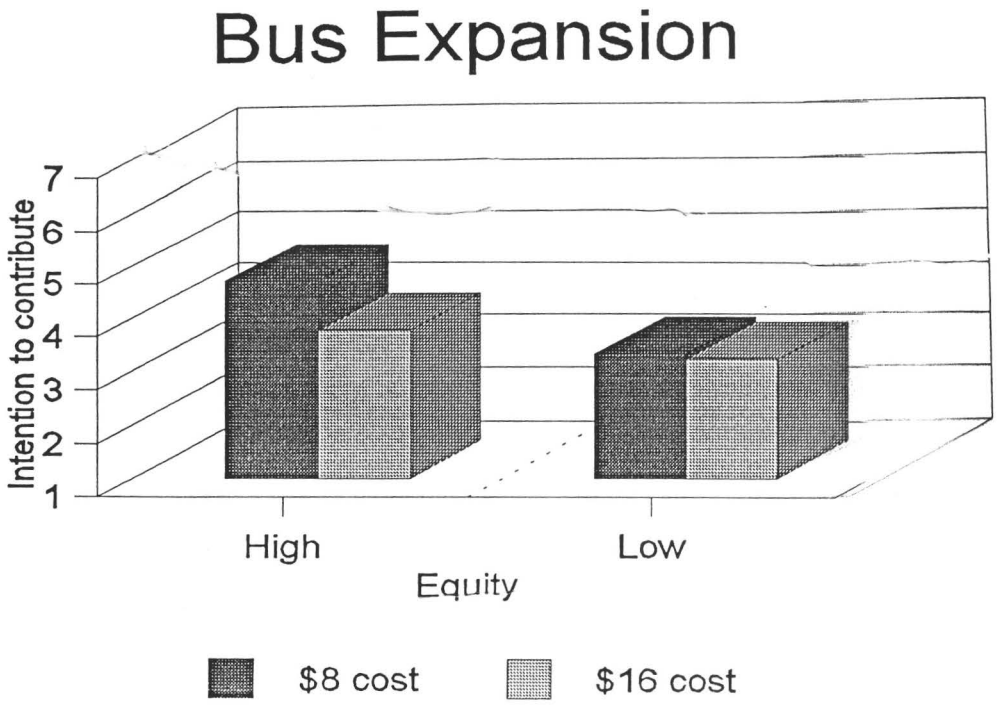

Figure 2c. Intention to contribute as a function of stipulated cost and equity of requested contribution.

Cost: F = 1.68, ns; Equity: F = 5.79, p < .05; Cost X Equity: F = 1.10, ns.

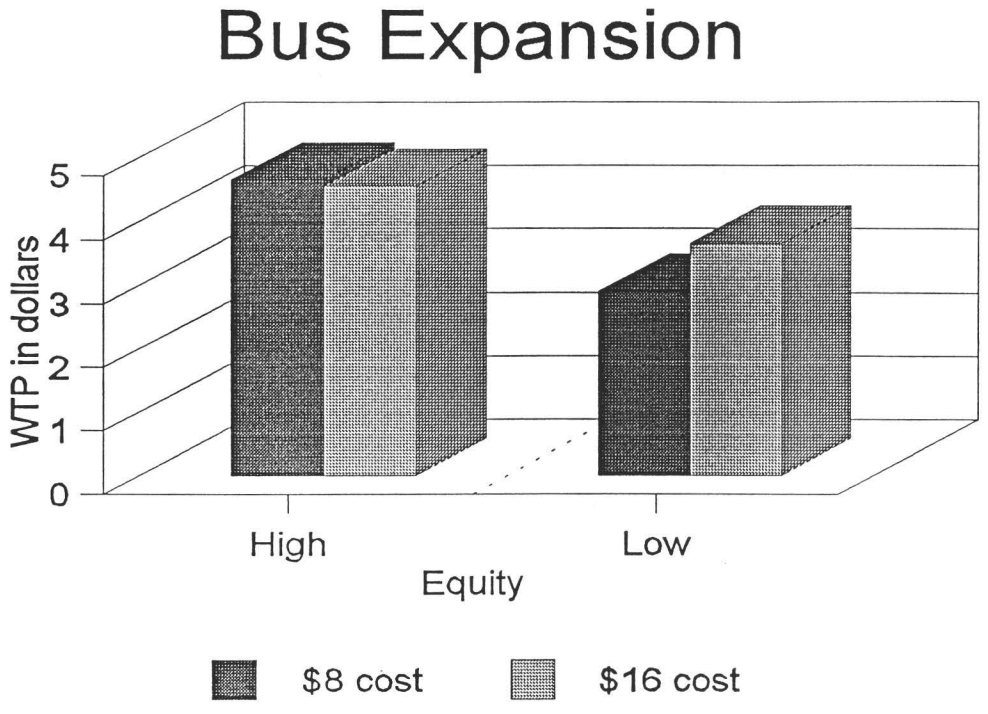

Figure 2d. Willingness to pay as a function of stipulated cost and equity of requested contribution.

Cost: F = .15, ns; Equity: F = 2.48, ns; Cost X Equity: F = .25, ns.

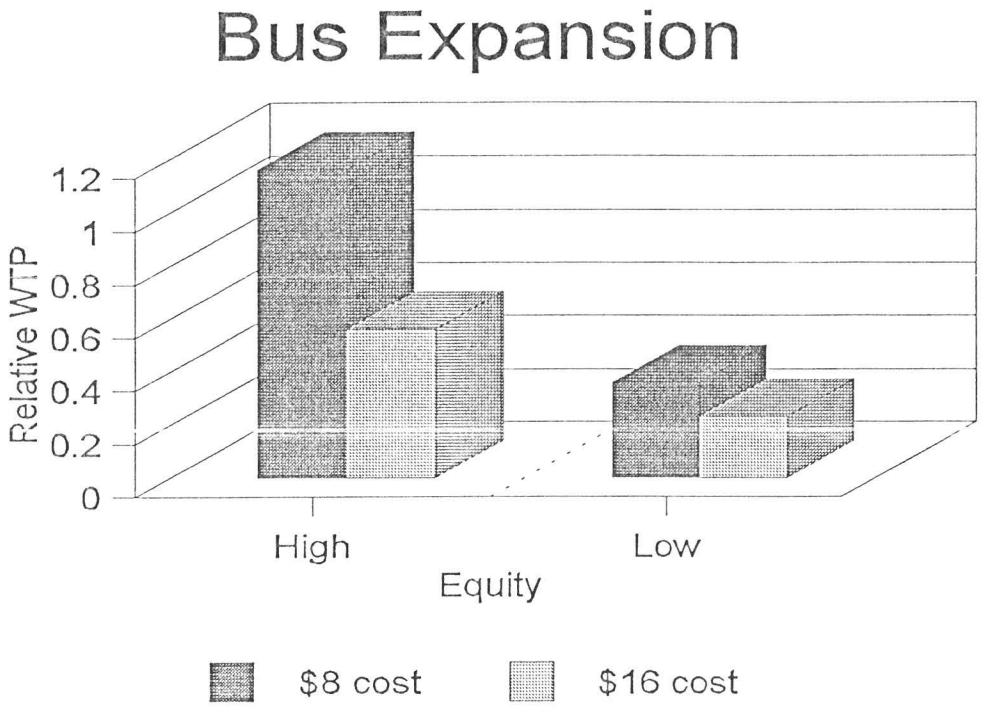

Figure 2e. Willingness to pay relative to amount requested, as a function of stipulated cost and equity of requested contribution.

Cost: $F = 9.16$, $p < .01$; Equity: $F = 22.47$, $p < .001$; Cost X Equity: $F = 3.65$, $p < .10$.

Table 3

Community Outreach: Within-Cell Multiple Regressions

Dependent Variable	Correlation Coefficient		Regression Coefficient		Multiple R
	Value	Fairness	Value	Fairness	
Intention	.54**	.54**	.33**	.33**	.60**
WTP	.56**	.62**	.27*	.44**	.65**

*p < .05; **p < .01.

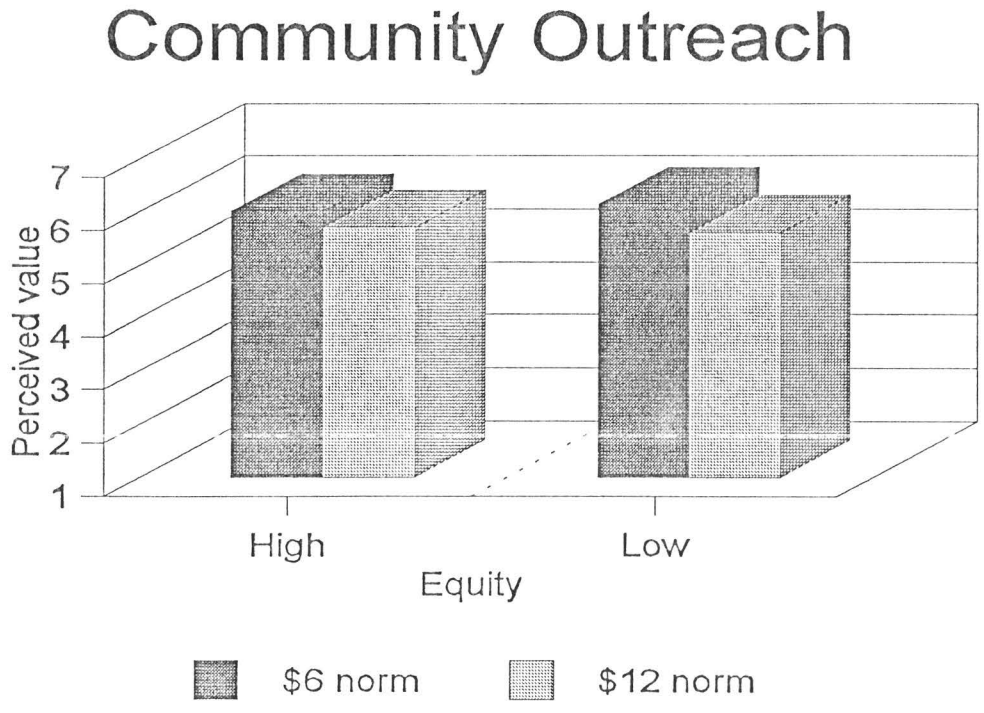

Figure 3a. Perceived value of community outreach project as a function of normative baseline and equity of requested contribution.

Cost: F = 2.51, ns; Equity: F = .01, ns; Cost X Equity: F = .19, ns.

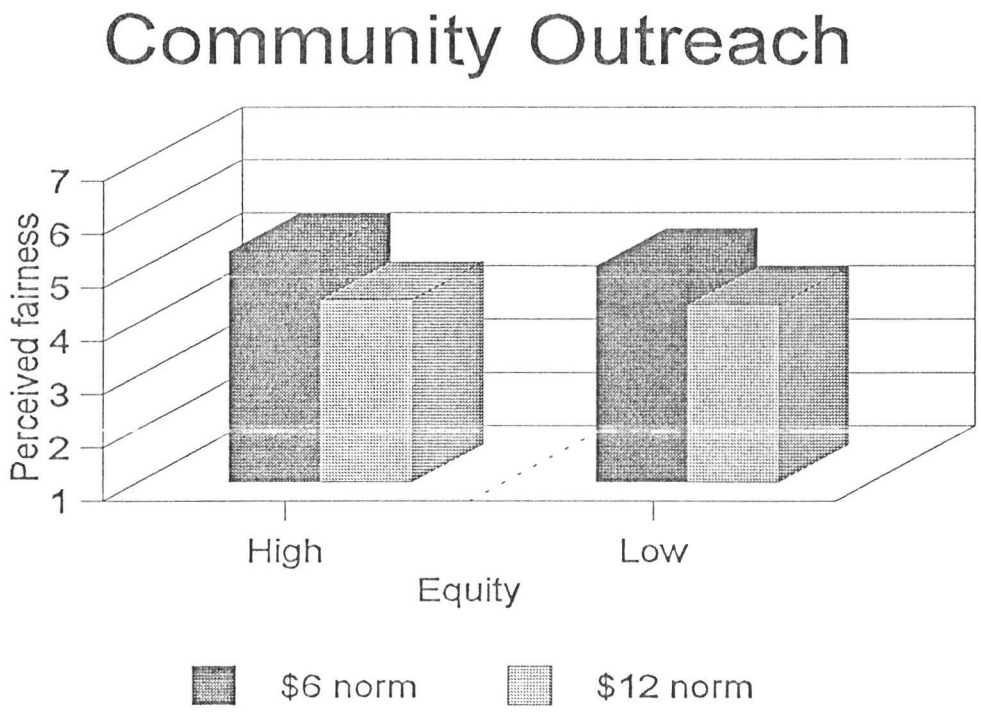

Figure 3b. Perceived fairness of community outreach project as a function of normative baseline and equity of requested contribution.

Cost: $F = 6.29$, $p < .05$; Equity: $F = .33$, ns; Cost X Equity: $F = .09$, ns.

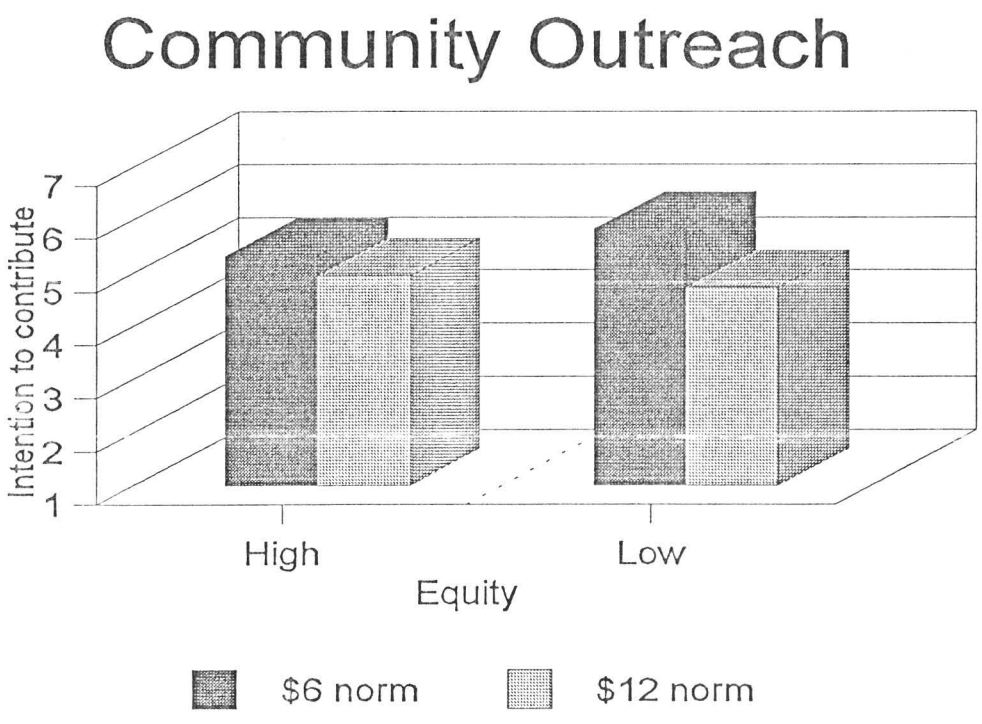

Figure 3c. Intention to contribute as a function of normative baseline and equity of requested contribution.

Cost: $F = 2.86$, $p < .10$; Equity: $F = .11$, ns; Cost X Equity: $F = .74$, ns.

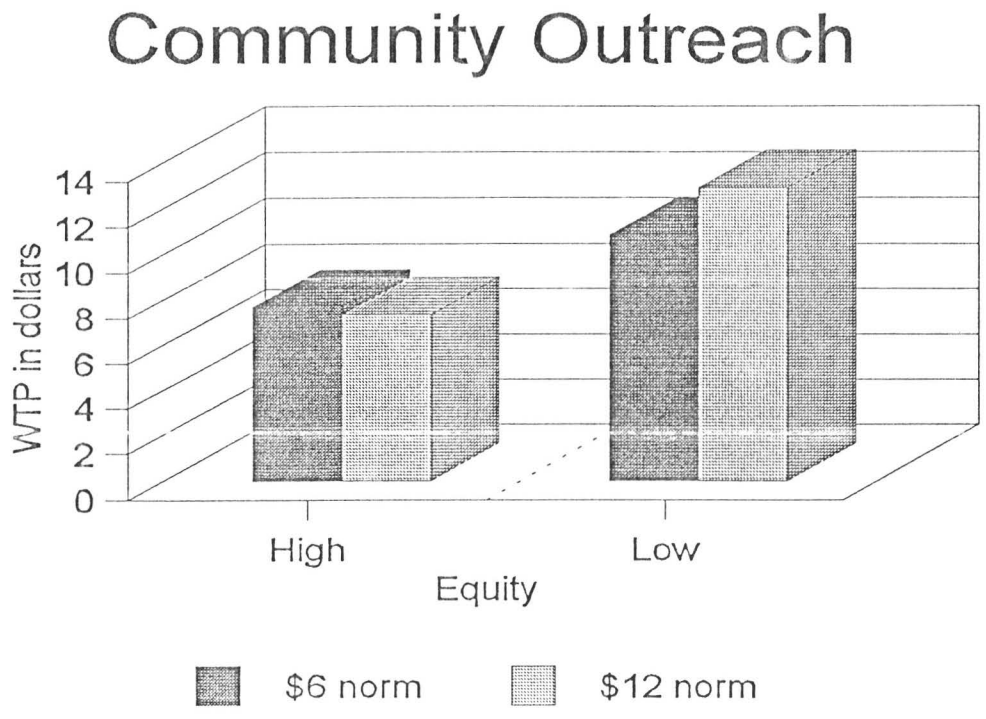

Figure 3d. Willingness to pay as a function of normative baseline and equity of requested contribution.

Cost: $F = .29$, ns; Equity: $F = 7.76$, $p < .01$; Cost X Equity: $F = .59$, ns.

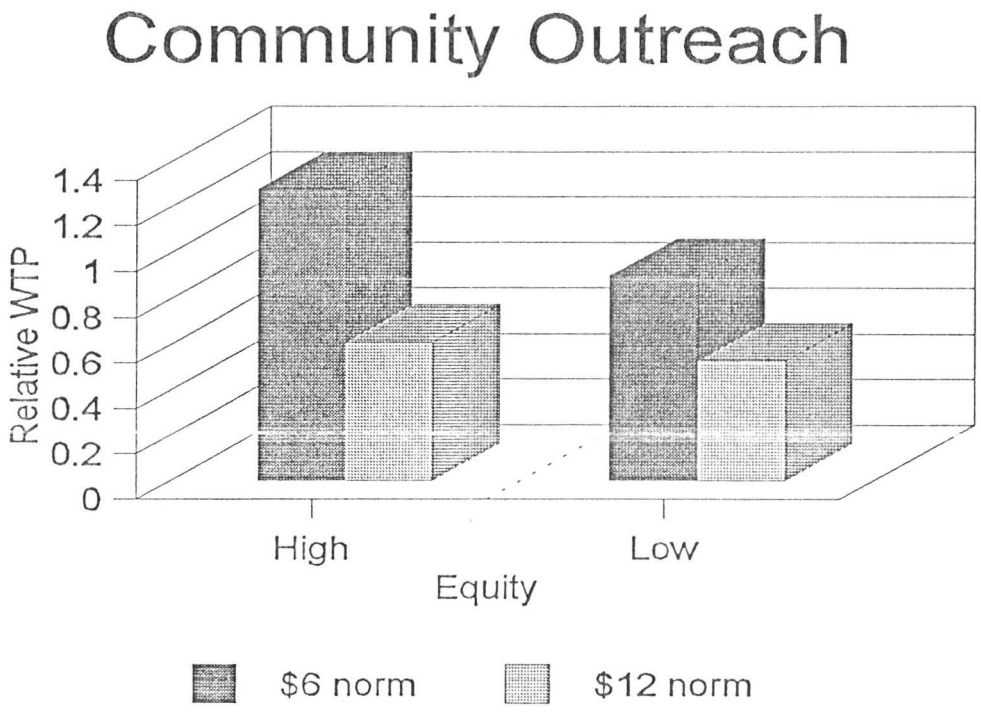

Figure 3e. Willingness to pay relative to amount requested, as a function of normative baseline and equity of requested contribution.

Cost: $F = 11.34$, $p < .01$; Equity: $F = 2.15$, ns; Cost X Equity: $F = .97$, ns.

Table 4

Campus Beautification: Within-Cell Multiple Regressions

Dependent Variable	Correlation Coefficient		Regression Coefficient		Multiple
	Value	Fairness	Value	Fairness	R
Intention	.46**	.58**	.21*	.47**	.61**
WTP	.34**	.51**	.09	.47**	.52**

*p < .05; **p < .01.

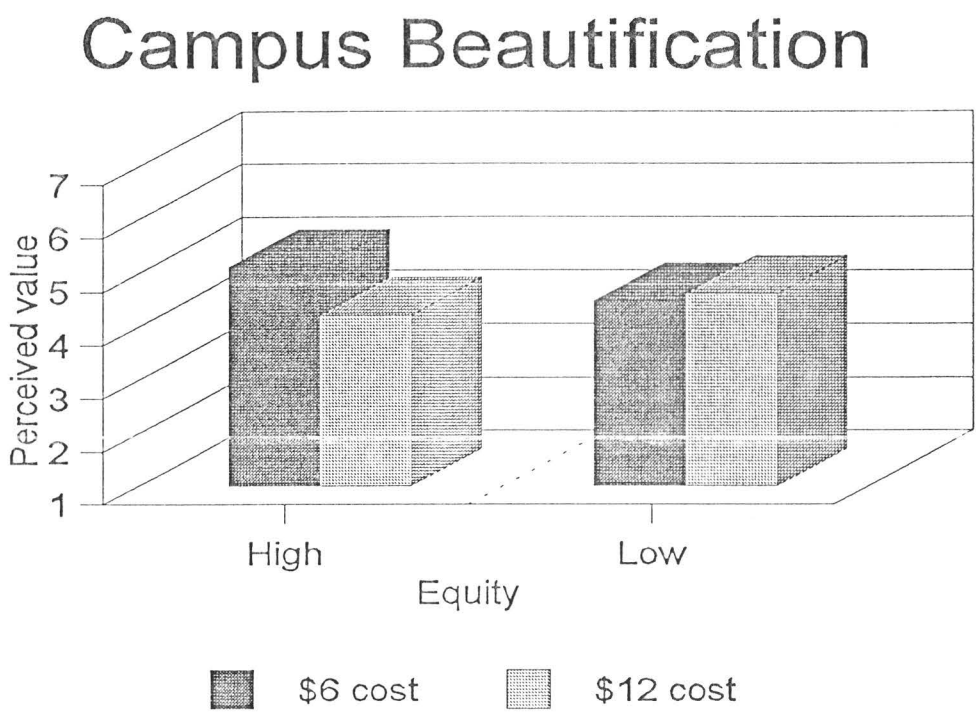

Figure 4a. Perceived value of campus beautification project as a function of stipulated cost and equity of requested contribution.

Cost: F = 1.90, ns; Equity: F = .18, ns; Cost X Equity: F = 2.46, ns.

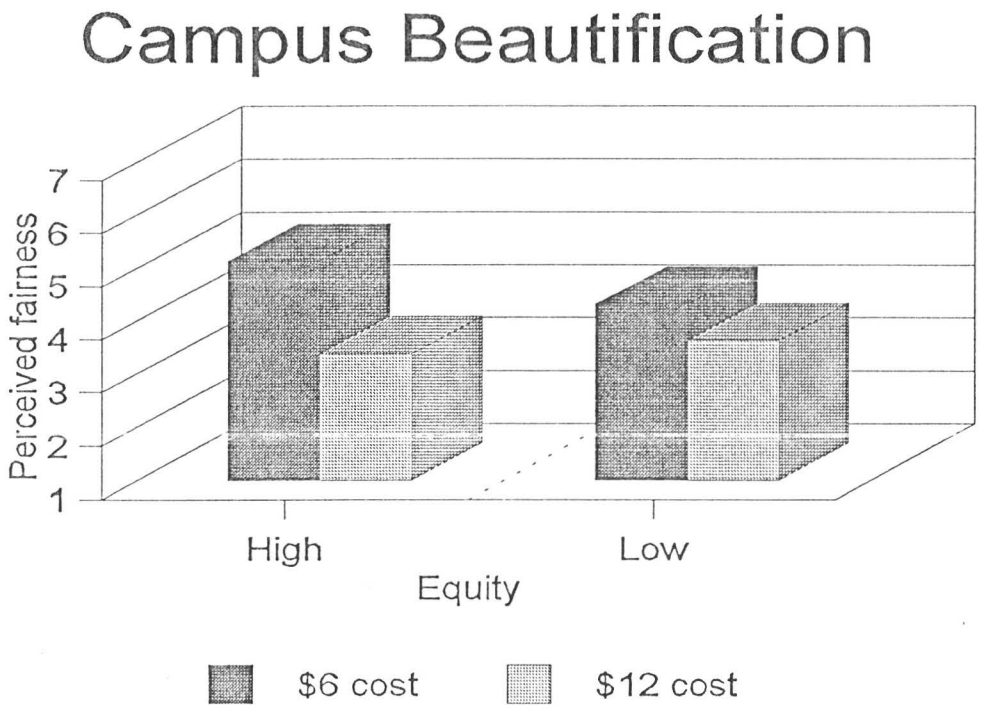

Figure 4b. Perceived fairness of requested contribution as a function of stipulated cost and equity of requested contribution.

Cost: $F = 12.82$, $p < .001$; Equity: $F = .70$, ns; Cost X Equity: $F = 2.46$, ns.

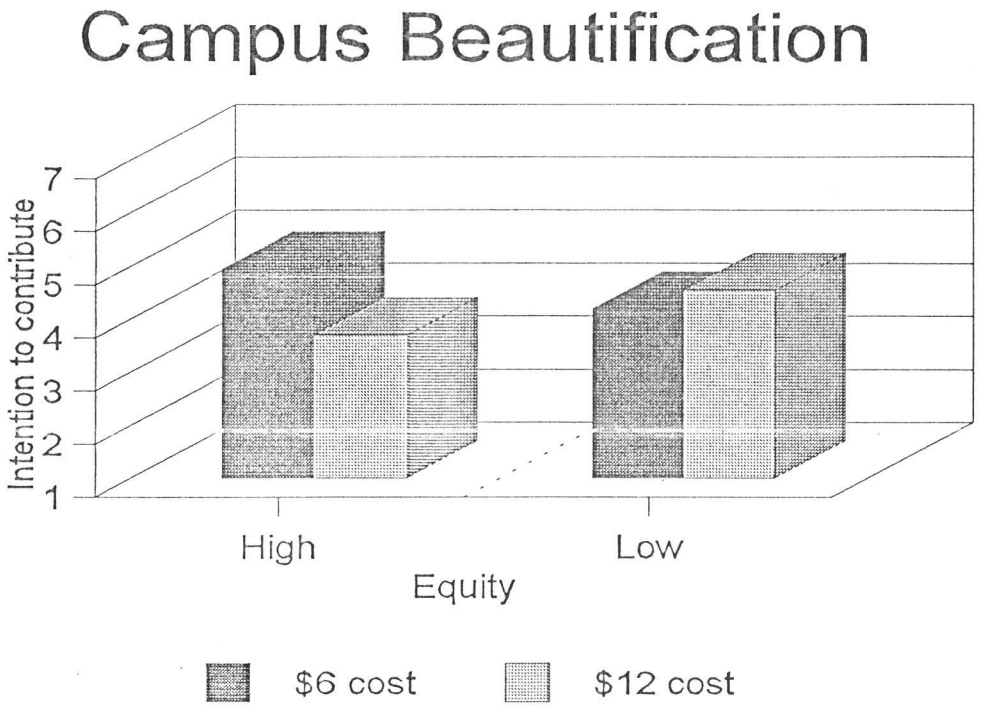

Figure 4c. Intention to contribute as a function of stipulated cost and equity of requested contribution.

Cost: $F = .02$, ns; Equity: $F = 1.30$, ns; Cost X Equity: $F = 4.10$, $p < .05$.

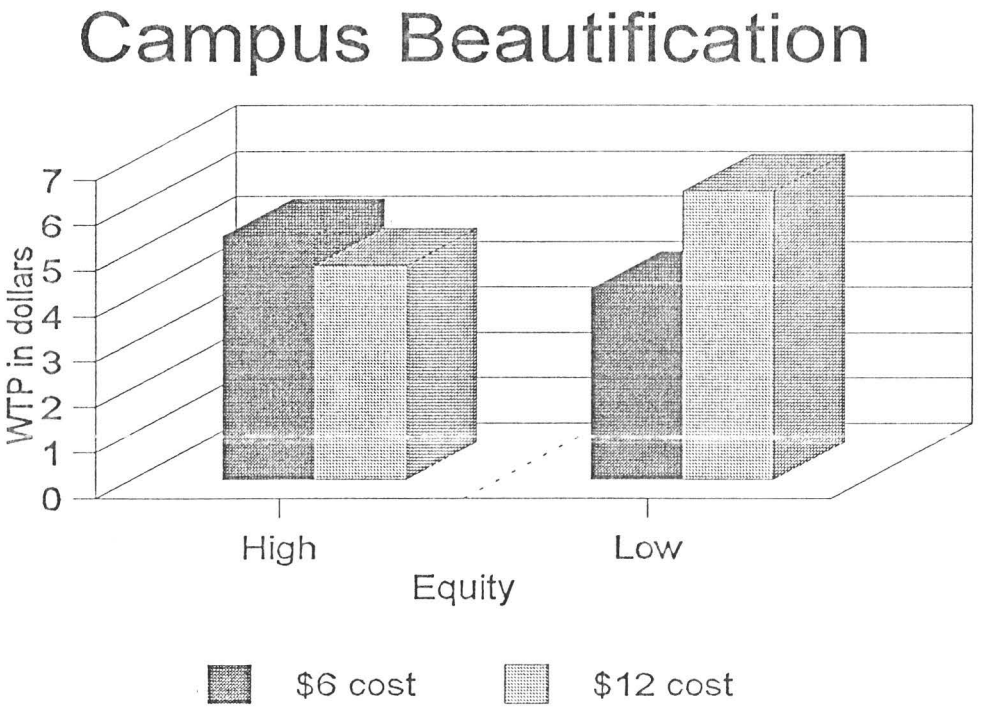

Figure 4d. Willingness to pay as a function of stipulated cost and equity of requested contribution.

Cost: $F = .80$, ns; Equity: $F = .09$, ns; Cost X Equity: $F = 2.79$, $p < .10$.

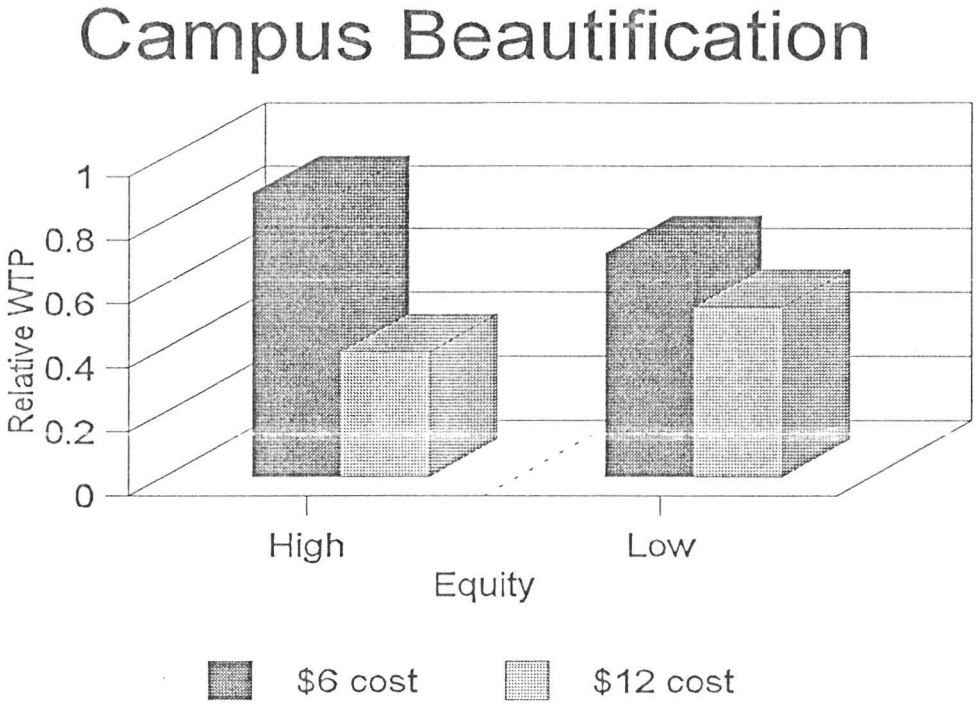

Figure 4e. Willingness to pay relative to amount requested, as a function of stipulated cost and equity of requested contribution.

Cost: $F = .8.91$, $p < .01$; Equity: $F = .06$,ns; Cost X Equity: $F = 2.15$,ns.

INSTRUCTIONS

UNIVERSITY OF MASSACHUSETTS ISSUES SURVEY

In this study, you will be given descriptions of four issues that are currently facing students at the University of Massachusetts. Please read these descriptions carefully, regardless of what you may know about the issues already. After reading the information you will be asked a few questions about the issues. There are no right or wrong answers to the questions, we are only interested in your thoughts and opinions. So, please answer all of the questions to the best of your ability and do not leave anything blank.

We would like you to evaluate each of the four issues separately, as if it were the only issue confronting the University. With respect to each issue, you will be asked to consider making a monetary contribution to a fund drive. Although you will be reading about four fund drives, only one of these drives will be instituted in the next five years. So please regard each of the fund drives as if it were the only one under consideration.

It is very important that you answer all of the questions in the order that they appear on the questionnaire. Please do not flip the pages ahead to see what else is coming or back to see what you had answered previously.

When you get to the section entitled **Part 2** please stop and wait for the experimenter to tell you to continue.

If you have any questions, please ask the experimenter now.

Thank you for your cooperation.

Please turn the page when you are ready to begin.

LIBRARY FUND

The Library system at UMASS has had to undergo a series of budget cuts over the past 5 years. As it stands, the money the library receives from the State is insufficient to adequately equip it with the current books that it needs to be a top-notch university library. In past years, the library had to drastically reduce the number of new books it purchased. In addition, bringing the library into the computer age is taking more time than necessary due to the lack of available funds. Keeping the library materials current is very important to providing students with a quality educational experience.

To pay for the needed computer equipment and book additions to the library, the University administration is planning to conduct a fund drive. Past experience with fund drives of this kind have given organizers a good idea of the number of people who can be expected to make a contribution. It is also known that individuals vary greatly in the amount of money they contribute. In light of this information, it can be projected that an average donation of **$5/15** would raise the amount of money needed to keep the library state-of-the-art for the next ten years.

Imagine that you are approached by the organizers of the library drive and are asked to donate **$5/10/15/30**. Please consider this fund drive by itself; that is, assume that you would not be asked for any other donations.

Would you be willing to make a voluntary contribution to the fund drive to improve the library at UMASS? (Please circle the number that best describes your degree of willingness to make a donation.)

Definitely Willing 1 2 3 4 5 6 7 Definitely Not Willing

If you were asked to make a pledge, how much money would you pledge to donate for the library fund? (Check one)

❑ $0 ❑ $5 ❑ $8 ❑ $10 ❑ $12 ❑ $15 ❑ $18 ❑ $20 ❑ $25 ❑ $30
❑ Other $_____

What are the advantages of having UMASS students volunteer to pay for the library improvements?

_____

_____

What are the disadvantages of having UMASS students volunteer to pay for the library improvements?

_____

_____

PIONEER VALLEY BUS EXPANSION PROGRAM

The Pioneer Valley Transit Authority (PVTA) has been petitioned to expand the local free bus service to some of the more remote residential areas in Amherst, as well as to other outlying communities. The proposed expansion will benefit the residents in the new service areas, most of whom are not students. However, students would also receive substantial benefits because increased bus use will reduce traffic and alleviate parking shortages on the UMASS campus. In addition, more of the outlying residential areas will become viable options for cheaper student housing. Funds currently available to run the buses are not sufficient to pay for the service expansion, which requires acquisition of new buses and hiring more drivers. The state has allocated additional money but it is not sufficient to cover the increased expenses. Consequently, the PVTA is planning to conduct a fund drive to help pay for the expansion program.

Past experience with fund drives of this kind have given the organizers a good idea of the number of people who can be expected to make a contribution. It is also known that individuals vary greatly in the amount of money they contribute. In light of this information, the PVTA plans to ask all residents in the area to make a donation of **$8/16**. Because students will not benefit from this program as much as residents, they will be asked to make a donation of **$4/8**. (Although students at the five colleges will not benefit from this program as much as residents, they will also be asked to make a donation of **$8/16**.)

Imagine that you are approached by the organizers of the bus expansion drive and are asked to donate **$4/8/16**. Please consider this fund drive by itself; that is, assume that you would not be asked for any other donations.

Would you be willing to make a voluntary contribution to the fund drive to expand the bus service in the Pioneer Valley? (Please circle the number that best describes your degree of willingness to make a donation.)

Definitely Willing 1 2 3 4 5 6 7 Definitely Not Willing

If you were asked to make a pledge, how much money would you pledge to donate for the bus service expansion program? (Check one)

❑ $0 ❑ $2 ❑ $4 ❑ $6 ❑ $8 ❑ $10 ❑ $12 ❑ $14 ❑ $16 ❑ $18
❑ Other $_____

What are the advantages of having UMASS students volunteer to pay for the bus expansion?

_____

_____

What are the disadvantages of having UMASS students volunteer to pay for the bus expansion?

UMASS COMMUNITY OUTREACH PROGRAM

Many people in communities surrounding the University of Massachusetts are experiencing difficulties due to increasing economic problems. Many employees are being laid off because of corporate downsizing and are unable to find new jobs. Although the state unemployment rate has remained stable for several months, the figures are misleading as only those people who are currently collecting unemployment benefits are counted. The figures do not include people who are no longer eligible for unemployment benefits but have not found new jobs. As a result, many families cannot afford basic necessities such as heat, a place to live and food. The homeless rate is growing in the communities near the UMASS. In addition, because of federal cutbacks, many children are forced to go to school hungry or without the proper clothing to keep warm in the winter. The university is planning to institute an outreach program where UMASS students can help people in nearby communities. The program will provide monetary aid to needy families in the Pioneer Valley and will also offer counseling, job training, and other support. Although the program will be run by non-students, it will provide a place where UMASS students can do voluntary work and get valuable training and skills.

To raise the necessary start-up funds, the university administration is planning a campus fund drive. Similar fund drives to raise money for outreach programs at other large state universities like UMASS have resulted in average student contributions of about $6/12.

Imagine that you are approached by the organizers of the community outreach fund drive and are asked to donate $5/12/24. Please consider this fund drive by itself; that is, assume that you would not be asked for any other donations.

Would you be willing to make a voluntary contribution to the fund drive to develop a community outreach program for the UMASS campus? (Please circle the number that best describes your degree of willingness to make a donation.)

Definitely Willing 1 2 3 4 5 6 7 Definitely Not Willing

If you were asked to make a pledge, how much money would you pledge to donate for the community outreach program? (Check one)

❑ $0 ❑ $1 ❑ $3 ❑ $5 ❑ $8 ❑ $10 ❑ $12 ❑ $15 ❑ $20 ❑ $25
❑ Other $_____

What are the advantages of having UMASS students volunteer to pay for the outreach program?

_____

_____

What are the disadvantages of having UMASS students volunteer to pay for the outreach program?

_____

_____

UMASS CAMPUS BEAUTIFICATION

In past years, the University of Massachusetts at Amherst campus has fallen into disrepair. State funds will soon be available to begin renovation of buildings most in need of repair, but very little money has been appropriated for maintenance of the campus's pathways and grounds. A continuing problem is the poor condition of the grass and shrubbery, especially near pathways. Landscape architects have concluded that the problem is caused mainly by the large number of students who (trucks and other delivery vehicles that) stray from the paved pathways and thus stunt the growth of grass and plants.

To correct the problem and prevent its recurrence, the ground crews are proposing to install new and improved pathways, to erect signs that would direct traffic, and to rope off or block access to certain areas. Because of the limited resources available for campus beautification, the administration is planning a drive to raise the necessary funds. Past experience with fund drives of this kind have given the organizers a good idea of the number of people who can be expected to make a contribution. It is also known that individuals vary greatly in the amount of money they contribute. In light of this information, the administration plans to ask all students to make a donation of **$6/12**.

Imagine that you are approached by the organizers of the campus beautification fund drive and are asked to donate **$6/12**. Please consider this fund drive by itself; that is, assume that you would not be asked for any other donations.

Would you be willing to make a voluntary contribution to the campus beautification fund? (Please circle the number that best describes your degree of willingness to make a donation.)

Definitely Willing 1 2 3 4 5 6 7 Definitely Not Willing

If you were asked to make a pledge, how much money would you pledge to donate for the community outreach program? (Check one)

❑ $0 ❑ $2 ❑ $4 ❑ $6 ❑ $8 ❑ $10 ❑ $12 ❑ $14 ❑ $16 ❑ $18
❑ Other $_____

What are the advantages of having UMASS students volunteer to pay for the campus beautification?

_____

_____

What are the disadvantages of having UMASS students volunteer to pay for the campus beautification?

_____

_____

INSTRUCTIONS

UNIVERSITY OF MASSACHUSETTS ISSUES SURVEY
PART 2

For the second part of this survey, we would like to ask you some additional questions about each of the programs you read for the first part. Each description is reprinted at the top of the page so you will not have to look back at the previous section to remember the details. Again, there are no right or wrong answers; please answer each question to the best of your ability.

Please remain seated when you are finished until the experimenter continues.

STOP!

Do not turn this page until the experimenter tells you to do so.

LIBRARY FUND

LIBRARY FUND

The Library system at UMASS has had to undergo a series of budget cuts over the past 5 years. As it stands, the money the library receives from the State is insufficient to adequately equip it with the current books that it needs to be a top-notch university library. In past years, the library had to drastically reduce the number of new books it purchased. In addition, bringing the library into the computer age is taking more time than necessary due to the lack of available funds. Keeping the library materials current is very important to providing students with a quality educational experience.

To pay for the needed computer equipment and book additions to the library, the University administration is planning to conduct a fund drive. Past experience with fund drives of this kind have given organizers a good idea of the number of people who can be expected to make a contribution. It is also known that individuals vary greatly in the amount of money they contribute. In light of this information, it can be projected that an average donation of **$5/15** would raise the amount of money needed to keep the library state-of-the-art for the next ten years.

Imagine that you are approached by the organizers of the library drive and are asked to donate **$5/10/15/30**. Please consider this fund drive by itself; that is, assume that you would not be asked for any other donations.

Please rate the library improvement project on the following scales:

Extremely Undesirable	1	2	3	4	5	6	7	Extremely Desirable
Extremely Unimportant	1	2	3	4	5	6	7	Extremely Important
Extremely Worthless	1	2	3	4	5	6	7	Extremely Worthwhile

To pay for this project, you would be asked to make a voluntary donation of **$5/10/15/30**. Please rate the amount of this donation on the following scales:

Extremely Unfair	1	2	3	4	5	6	7	Extremely Fair
Extremely Unreasonable	1	2	3	4	5	6	7	Extremely Reasonable
Extremely Unjust	1	2	3	4	5	6	7	Extremely Just

PIONEER VALLEY BUS EXPANSION PROGRAM

The Pioneer Valley Transit Authority (PVTA) has been petitioned to expand the local free bus service to some of the more remote residential areas in Amherst, as well as to other outlying communities. The proposed expansion will benefit the residents in the new service areas, most of whom are not students. However, students would also receive substantial benefits because increased bus use will reduce traffic and alleviate parking shortages on the UMASS campus. In addition, more of the outlying residential areas will become viable options for cheaper student housing. Funds currently available to run the buses are not sufficient to pay for the service expansion, which requires acquisition of new buses and hiring more drivers. The state has allocated additional money but it is not sufficient to cover the increased expenses. Consequently, the PVTA is planning to conduct a fund drive to help pay for the expansion program.

Past experience with fund drives of this kind have given the organizers a good idea of the number of people who can be expected to make a contribution. It is also known that individuals vary greatly in the amount of money they contribute. In light of this information, the PVTA plans to ask all residents in the area to make a donation of **$8/16**. Because students will not benefit from this program as much as residents, they will be asked to make a donation of **$4/8**. (Although students at the five colleges will not benefit from this program as much as residents, they will also be asked to make a donation of $8/16.)

Imagine that you are approached by the organizers of the bus expansion drive and are asked to donate **$4/8/16**. Please consider this fund drive by itself; that is, assume that you would not be asked for any other donations.

Please rate the bus expansion project on the following scales:

Extremely Undesirable	1	2	3	4	5	6	7	Extremely Desirable
Extremely Unimportant	1	2	3	4	5	6	7	Extremely Important
Extremely Worthless	1	2	3	4	5	6	7	Extremely Worthwhile

To pay for this project, you would be asked to make a voluntary donation of **$4/8/16**. Please rate the amount of this donation on the following scales:

Extremely Unfair	1	2	3	4	5	6	7	Extremely Fair
Extremely Unreasonable	1	2	3	4	5	6	7	Extremely Reasonable
Extremely Unjust	1	2	3	4	5	6	7	Extremely Just

UMASS COMMUNITY OUTREACH PROGRAM

Many people in communities surrounding the University of Massachusetts are experiencing difficulties due to increasing economic problems. Many employees are being laid off because of corporate downsizing and are unable to find new jobs. Although the state unemployment rate has remained stable for several months, the figures are misleading as only those people who are currently collecting unemployment benefits are counted. The figures do not include people who are no longer eligible for unemployment benefits but have not found new jobs. As a result, many families cannot afford basic necessities such as heat, a place to live and food. The homeless rate is growing in the communities near the UMASS. In addition, because of federal cutbacks, many children are forced to go to school hungry or without the proper clothing to keep warm in the winter. The university is planning to institute an outreach program where UMASS students can help people in nearby communities. The program will provide monetary aid to needy families in the Pioneer Valley and will also offer counseling, job training, and other support. Although the program will be run by non-students, it will provide a place where UMASS students can do voluntary work and get valuable training and skills.

To raise the necessary start-up funds, the university administration is planning a campus fund drive. Similar fund drives to raise money for outreach programs at other large state universities like UMASS have resulted in average student contributions of about $6/12.

Imagine that you are approached by the organizers of the community outreach fund drive and are asked to donate $6/12/24. Please consider this fund drive by itself; that is, assume that you would not be asked for any other donations.

Please rate the community outreach project on the following scales:

Extremely Undesirable	1	2	3	4	5	6	7	Extremely Desirable
Extremely Unimportant	1	2	3	4	5	6	7	Extremely Important
Extremely Worthless	1	2	3	4	5	6	7	Extremely Worthwhile

To pay for this project, you would be asked to make a voluntary donation of $6/12/24. Please rate the amount of this donation on the following scales:

Extremely Unfair	1	2	3	4	5	6	7	Extremely Fair
Extremely Unreasonable	1	2	3	4	5	6	7	Extremely Reasonable
Extremely Unjust	1	2	3	4	5	6	7	Extremely Just

UMASS CAMPUS BEAUTIFICATION

In past years, the University of Massachusetts at Amherst campus has fallen into disrepair. State funds will soon be available to begin renovation of buildings most in need of repair, but very little money has been appropriated for maintenance of the campus's pathways and grounds. A continuing problem is the poor condition of the grass and shrubbery, especially near pathways. Landscape architects have concluded that the problem is caused mainly by the large number of students who (trucks and other delivery vehicles that) stray from the paved pathways and thus stunt the growth of grass and plants.

To correct the problem and prevent its recurrence, the ground crews are proposing to install new and improved pathways, to erect signs that would direct traffic, and to rope off or block access to certain areas. Because of the limited resources available for campus beautification, the administration is planning a drive to raise the necessary funds. Past experience with fund drives of this kind have given the organizers a good idea of the number of people who can be expected to make a contribution. It is also known that individuals vary greatly in the amount of money they contribute. In light of this information, the administration plans to ask all students to make a donation of **$6/12**.

Imagine that you are approached by the organizers of the campus beautification fund drive and are asked to donate **$6/12**. Please consider this fund drive by itself; that is, assume that you would not be asked for any other donations.

Please rate the campus beautification project on the following scales:

Extremely Undesirable	1	2	3	4	5	6	7	Extremely Desirable
Extremely Unimportant	1	2	3	4	5	6	7	Extremely Important
Extremely Worthless	1	2	3	4	5	6	7	Extremely Worthwhile

To pay for this project, you would be asked to make a voluntary donation of **$6/12**. Please rate the amount of this donation on the following scales:

Extremely Unfair	1	2	3	4	5	6	7	Extremely Fair
Extremely Unreasonable	1	2	3	4	5	6	7	Extremely Reasonable
Extremely Unjust	1	2	3	4	5	6	7	Extremely Just